```
Layer (type)              Output Shape        Param #
=================================================================
input_1 (InputLayer)      (None, 1)           0
_____
lambda_1 (Lambda)         (None, 512)         0
_____
dense_1 (Dense)           (None, 128)         65664
_____
dropout_1 (Dropout)       (None, 128)         0
_____
dense_2 (Dense)           (None, 1)           129
=================================================================
Total params: 65,793
Trainable params: 65,793
Non-trainable params: 0
_____
Train on 90000 samples, validate on 15000 samples
Epoch 1/20
90000/90000 [==============================] - 166s 2ms/step - loss: 0.3686 - acc: 0.8363 - val_loss: 0.3532 - val_acc: 0.8443
Epoch 2/20
90000/90000 [==============================] - 163s 2ms/step - loss: 0.3388 - acc: 0.8516 - val_loss: 0.3332 - val_acc: 0.8545
Epoch 3/20
90000/90000 [==============================] - 164s 2ms/step - loss: 0.3297 - acc: 0.8560 - val_loss: 0.3242 - val_acc: 0.8600
Epoch 4/20
90000/90000 [==============================] - 164s 2ms/step - loss: 0.3220 - acc: 0.8595 - val_loss: 0.3288 - val_acc: 0.8573
Epoch 5/20
90000/90000 [==============================] - 163s 2ms/step - loss: 0.3155 - acc: 0.8626 - val_loss: 0.3169 - val_acc: 0.8650
Epoch 6/20
90000/90000 [==============================] - 164s 2ms/step - loss: 0.3112 - acc: 0.8664 - val_loss: 0.3151 - val_acc: 0.8664
Epoch 7/20
90000/90000 [==============================] - 163s 2ms/step - loss: 0.3060 - acc: 0.8685 - val_loss: 0.3155 - val_acc: 0.8645
Epoch 8/20
90000/90000 [==============================] - 163s 2ms/step - loss: 0.3016 - acc: 0.8707 - val_loss: 0.3093 - val_acc: 0.8699
Epoch 9/20
90000/90000 [==============================] - 163s 2ms/step - loss: 0.2968 - acc: 0.8728 - val_loss: 0.3057 - val_acc: 0.8694
Epoch 10/20
90000/90000 [==============================] - 164s 2ms/step - loss: 0.2924 - acc: 0.8743 - val_loss: 0.3074 - val_acc: 0.8696
Epoch 11/20
90000/90000 [==============================] - 163s 2ms/step - loss: 0.2888 - acc: 0.8757 - val_loss: 0.3028 - val_acc: 0.8719
Epoch 12/20
90000/90000 [==============================] - 163s 2ms/step - loss: 0.2868 - acc: 0.8773 - val_loss: 0.2999 - val_acc: 0.8716
Epoch 13/20
90000/90000 [==============================] - 163s 2ms/step - loss: 0.2814 - acc: 0.8794 - val_loss: 0.2999 - val_acc: 0.8709
Epoch 14/20
90000/90000 [==============================] - 166s 2ms/step - loss: 0.2790 - acc: 0.8823 - val_loss: 0.2968 - val_acc: 0.8743
Epoch 15/20
90000/90000 [==============================] - 161s 2ms/step - loss: 0.2749 - acc: 0.8834 - val_loss: 0.3005 - val_acc: 0.8715
Epoch 16/20
90000/90000 [==============================] - 162s 2ms/step - loss: 0.2715 - acc: 0.8851 - val_loss: 0.2942 - val_acc: 0.8751
Epoch 17/20
90000/90000 [==============================] - 163s 2ms/step - loss: 0.2677 - acc: 0.8883 - val_loss: 0.2922 - val_acc: 0.8770
Epoch 18/20
90000/90000 [==============================] - 162s 2ms/step - loss: 0.2649 - acc: 0.8889 - val_loss: 0.2955 - val_acc: 0.8761
Epoch 19/20
90000/90000 [==============================] - 162s 2ms/step - loss: 0.2613 - acc: 0.8900 - val_loss: 0.2897 - val_acc: 0.8772
Epoch 20/20
90000/90000 [==============================] - 161s 2ms/step - loss: 0.2592 - acc: 0.8907 - val_loss: 0.2900 - val_acc: 0.8781
45000/45000 [==============================] - 66s 1ms/step

Test score: 0.28522262671788534
Test accuracy: 0.8791555555555556
```

model accuracy & loss